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## ON SOME HELICINA FROM THE DOMINICAN REPUBLIC

BY MORRIS K. JACOBSON

American Museum Natural History

AND

WILLIAM J. CLENCH

Museum Comparative Zoology, Cambridge, Mass. 02138

While attempting to determine a collection of land and fresh-water shells from the Dominican Republic, we found it was necessary to make the following rectifications in the nomenclature of certain heliciniids of Hispaniola.

1. *Helicina (Helicina) castilloi* Clench & Jaume (1946, Rev. Soc. Malac. 'Carlos de la Torre', 4: 7, text figs. 1-3) from Rancho Arriba, San José de Ocoa, Azúa, Dominican Republic is a junior synonym of *Helicina gabbi* (Crosse et Newcomb MS) Crosse (1873, Jour. Conchyl., 21: 354; *ibid.*, 1874, 22: 87, pl. 1, fig. 4) from Samaná. The brown color of the type-figure of Crosse's description of *gabbi* occurs very frequently in recently collected specimens where we also find individuals of various shades of green, generally marked with reddish brown bands, dots, blotches or other kinds of ornamentation.

2. The status of the land prosobranch species *Helicina viridis* Lamarck, 1822, has been confused almost since the date of its first description. Much clarification was offered by Crosse (1890, *infra*) but some points still remained to be cleared up. Below is a brief account of the history of the taxon.

Lamarck (1822, Anim. Sans Vert., vol. 6 (2), p. 103) named *Helicina viridis* from Saint-Domingue [Hispaniola] in a short Latin description. The diameter was given as "2 lignes", or about 4 mm. As Crosse noted (1891, Jour. Conchyl., vol. 39, p. 190), Lamarck's type-specimen was an immature shell, a fact which explains the words "labro simplici, acuto" in the original description. This specimen, in spite of certain doubts expressed by

Crosse (1891) and Mermod (1951) (see below) is the one figured by Chenu in Lamarck's "Recueil de Coquilles décrites par Lamarck" (1841, pl. 27, figs. 3 a-d), and photographed by Mermod (1951, Rev. Suisse Zool., vol. 58, p. 716, text fig. 70). These figures are of a green shell with, in the case of fig. 3a by Chenu, a white peripheral band ornamented by 10 brown dots which, in Mermod's opinion, were too vividly colored. There is in addition a brown spot on the apex. This brown ornamentation was not mentioned by Lamarck, but it could easily have been overlooked in such a small specimen. Although Crosse (1891) as well as Mermod (1951) criticized Chenu for some details of the drawing, the fact remains that *viridis* Lamarck is a small, green helicid, ornamented in places by brown areas.

Gray (1825, Zool. Journ., vol. 1, p. 67) discussed a shell he thought to be *viridis* Lamarck. He gave the dimensions as 6/20 of an inch in axis [= height], and 11/20 of an inch in diameter, a much larger shell, as he admitted, than the immature one described by Lamarck. The figure (pl. 6, fig. 7), copied by Sowerby (1847, Thes. Conchyl., vol. 1, pl. 2, fig. 67), shows a green shell with a gently expanded outer lip and a slight peripheral carina. In 1866 Sowerby again produced a figure (Thes. Conchyl., vol. 3, pl. 276, fig. 379) as *viridis* which, as Crosse stated (*l.c.*) is completely unrecognizable. Sowerby also pictured a shell (*ibid.*, pl. 276, fig. 380) under the new name *Helicina aurantioviridis* which H. Cuming had sent him from the Sallé collection made in Santo Domingo. This shell had been called *H. viridis* by Sallé, but because it did not resemble the specimen figured by Gray, Sowerby decided that he was dealing with a new species. Pfeiffer (1851, Zeitschr. Malak., vol. 7, p. 77), laboring under the same misconception, had already named this presumably new species *Helicina versicolor*.

Crosse, in the meantime, had obtained a different species which he realized was the real *viridis* of Lamarck. He figured this species (1891, Journ. Conchyl., vol. 39, pl. 3, figs. 8a, 8b, 8c, 8d) and these figures coincide almost exactly with the holotype (MCZ 188267) and paratypes (MCZ 188268) of *Helicina juliae* Clench (1962, Breviora, no. 173, p. 2, pl. 1, fig. 2). Wagner (1910, Martini & Chemnitz, Conchyl.-Cab. (2), vol. 1, sect. 18, pt. 2, p. 321, pl. 64, figs. 8-11) also figured the same species from a somewhat

larger (6 mm.) but still immature specimen in the Berlin Museum. Crosse decided that the figures of the larger shell presented by Gray and Sowerby were, "sans valeur . . . qu'il convient de n'en tenir aucun compte" (*l.c.*, p. 190).

If this means that they are fanciful and based upon no real shells, Crosse's conclusion is in error. Through the kindness of Dr. Peake of the British Museum (Natural History) we were able to examine Gray's type. We saw that not only is it not *viridis* Lamarck, but is an apparently unnamed species. We will describe it below under the name *Helicina grayi*. We feel completely justified in doing this even with only the type-specimen before us for examination, because this seems to be the easiest way to clear up finally the problem of *viridis* Lamarck *et al.*

There remains little reason to doubt that the true Lamarckian species is the one figured by Crosse and by Mermod and named *juliae* by Clench. The brown spots overlooked by Lamarck and illustrated by Chenu, together with other types of brown markings, are found only on the specimens called *viridis* by Crosse; they are absent from the two larger species described below. Moreover, the smaller species is found not far from the environs of Santo Domingo City. It is most likely that Lamarck's specimen came from an accessible area not far from the capital city.

The synonymy resulting from the discussion above is as follows:

#### *Helicina viridis* Lamarck, 1822

*Helicina viridis* Lamarck, 1822, An. s. Vert., vol. 6 (2), p. 103, type-locality Saint-Domingue [Hispaniola]; type in Geneva Museum; Chenu, 1841 [in] Delessert, Recueil de Coquilles etc., pl. 27, figs. 3 a-d; Mermod, 1951, Revue Suisse de Zool., vol. 58, p. 716, text fig. 70.

*Helicina viridis* Lamarck. Crosse, 1891, Jour. Conchyl., vol. 39, pp. 188-191, pl. 3, figs. 8, 8 a-c; Wagner, 1910 [in] Martini & Chemnitz, Conchyl. Cab., (2), vol. 1: sect. 18, pt. 2, p. 321, pl. 64, figs. 8-11.

*Helicina versicolor* Pfeiffer, 1851, Zeitschr. Malak., vol. 7, p. 77, type-locality, Haiti; type probably destroyed.

*Helicina aurantioviridis* Sowerby, 1866, Thes. Conchyl., vol. 3, pl. 276, fig. 380; no locality given; type, BM (NH) 19706.

*Helicina juliae* Clench, 1962, Breviora, no. 173, p. 2, pl. 1,

fig. 2, type-locality, Colonia Ramfis, 20 km. W. of San Cristóbal, República Dominicana; holotype, MCZ 188267.

*Helicina grayi* Jacobson & Clench, *new species*  
(Figure 2)

*Helicina viridis* "Lamarck." Gray, 1825, Zool. Journ., vol. 1, p. 67, pl. 6, fig. 17 (not Lamarck).

*Helicina viridis* "Lamarck." Sowerby, 1847, Thes. Conchyl., vol. 1, pl. 2, fig. 67; 1866, Thes. Conchyl., vol. 3, pl. 276, fig. 379 (not Lamarck).

Holotype, BM(NH) 19705 (Santo Domingo = Hispaniola).

*Description*—Shell about 7 mm. in height, 12 mm. in width, carinate, depressed, rather fragile, translucent, sublustrous. Whorls 5, weakly convex, increasing rapidly in width, the last whorl half as wide again as the penultimate. Body whorl rounded below, sharply and narrowly carinate at the periphery, descending at the aperture where the carina slightly overhangs it. Color bluish green above the carina, lighter on the spire, the early post-nuclear whorls, keel, peristome, and parietal callus bluish white, with a small, yellow, irregular stain near the protoconch. Aperture oblique, semilunate, well-rounded but distorted at the periphery by the keel. Palatal lip slightly thickened, shortly expanded, merging basally in a rounded angle with the columella. Parietal callus thickened, lustrous, minutely and regularly punctate, bluish white in umbilical region, bounded parietally by a dark bluish green band which widens as it curves around the white portion and enters deep into the aperture along the upper half. Columella white, diagonal, lightly inflated above, shortly rounded below, terminating in a short, rounded thickening of the basal lip. Suture well-impressed. Sculpture of variously strong, diagonal growth lines only, surface minutely punctate. Lineolations inside the shell substance not distinct, separated by narrow intervals, irregularly sinuous. Protoconch  $1\frac{1}{2}$  whorls, white with irregular yellow blotch at the suture, minutely punctate. Periostracum thin, strong, glossy. Operculum unknown.

height            width

11.2 mm.    7.1 mm.

*Remarks*—This specimen was figured by both Gray (1825) and Sowerby (1847) in somewhat exaggerated colors. A keel is not

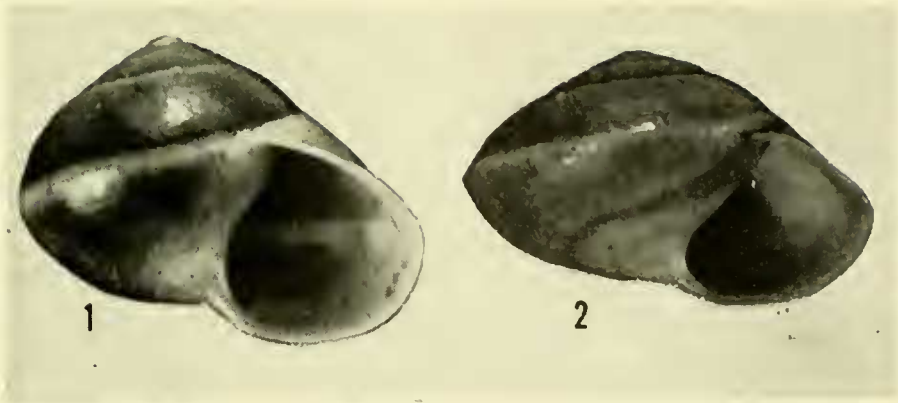


Fig. 1. *Helicina prasinata* Jacobson and Clench, *new species*, Holotype, 9.6 mm. in height. Fig. 2. *Helicina grayi* Jacobson and Clench, *new species*. Holotype, 7.1 mm. in height.

unusual in Neotropical *Helicina* but *H. grayi* differs from the other keeled forms (*heati* Pfeiffer from Grenada, *amoena* Pfeiffer from Mexico and Central America, *salleana* Gray from Mexico, and *neritella* Lamarck from Jamaica) in the more acute carina, the greenish blue color, the fragile shell texture, the more depressed outline, and the relatively smaller size. It is closest to *Helicina cruciata* Weinland 1880, but differs in being about twice as large, in possessing a green instead of reddish (rubella) color, in having a relatively smooth instead of a decussated surface, and in lacking the basal labial tooth.

Gray's label in BM (NH) bears the words "S. Domingo & Cuba," but someone drew a line through the word "Cuba." As far as is known, no Cuban *Helicina* resembles *grayi*.

3. Another undescribed *Helicina* from the Dominican Republic partially formed the basis for the remarks made by Clench & Jaume (1946, *Rev. Soc. Malac.*, vol. 4, p. 8), and Clench (1962, *Breviora*, no. 173: 2). The shells of this species differ considerably from the type of *grayi*, especially in color and in the absence of the peripheral keel. We introduce them as *Helicina prasinata* new species.

*Helicina prasinata* new species  
Figure 1

*Helicina viridis* "Lamarck." Clench & Jaume, 1946, *Rev. Soc. Malac.*, vol. 4, p. 8; Clench, 1962, *Breviora* no. 173, p. 2 (not Lamarck).

Holotype, MCZ 187927, Monteado Nuevo, 20 km. S.E. of Polo, Barahona Province, Dominican Republic. R. A. Howard leg.

Paratype, MCZ 90683, Loma Vieja, Constanza, La Vega Province, Dominican Republic. P. J. Darlington, legit.

*Description*—Shell reaching about 12 mm. in diameter, rather thin, smooth (depressed turbinate, white or pale yellowish green under a strong, green, glossy periostracum. Whorls about 5, barely inflated, earlier whorls slowly increasing in width, but body whorl more than twice as wide as the penult, moderately rounded, descending shortly at aperture; base slightly inflated. Color of the glossy periostracum bright, grass-green, somewhat lighter and a bit olivaceous below, with a white subperipheral band; lip and basal callus greenish white. Aperture oblique, widely semilunate, white internally with the subperipheral band showing through. Palatal lip gently but distinctly expanded, less so at either termination, narrowly reflected near columella where it has a very low, tooth-like protuberance. Parietal area with an irregular, glossy wash, pale yellowish green or white, not raised. Columella diagonal, evenly and widely rounded below, slightly convex above. Suture weakly impressed with a very narrow, weakly delimited, white band at summit of the whorls. Sculpture of fine, diagonal growth lines crossed by numerous, closely set, subequidistant spiral cords, obsolescent on the base. Protoconch  $1\frac{1}{2}$  whorls, rounded, minutely pitted, light yellowish green, barely raised above succeeding whorls. Periostracum strong, glossy, bearing the green color. Operculum thin, light buff, translucent, with a slightly raised, marginal ridge on the inner edge.

height	width	
9.6 mm	11.7 mm	Holotype
9.7	12.3	Paratype

*Remarks*—The shells of this new species can be confused with those of *Helicina gabbi* Crosse, but are readily distinguished from the latter by their smaller size, less solid substance, and especially the distinctly expanded lip. In the two specimens of the type-lot the only color seems to be either grassy or olivaceous green with a greenish-white subperipheral band; the vivid reddish or brown color found in so many specimens of *gabbi* and in the smaller *viridis*, is absent or appears as a slight tinge which renders the green on the base somewhat olivaceous. The parietal callus of *gabbi* is relatively larger, raised, and more sharply delimited. The closely set, narrow spiral cords of *prasinata* are

absent in *gabbi*. The new species is larger than *viridis* Lamarck and is furthermore distinguished by its lack of brown color and its more flaring lip. The green color of *prasinata* resembles that of *Papuina pulcherrima* Rensch from Manus Island, Bismarck Archipelago. From its shape, texture, and flaring lip, the new species seems to belong in *Helicina* s. s., the type-species of which is *H. neritella* Lamarck from Jamaica.

The trivial name of the new species is based upon the Greek word for green.

4. Clench & Jaume (1946, Rev. Soc. Mal., vol. 4, p. 8) listed some localities for *Helicina viridis*. Upon examining the lots in the MCZ upon which these data are based, we find that the specimens should be referred to *H. gabbi*. The localities where the true *viridis* is found are the ones given for *juliae* (q. v.).

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## A NEW SPECIES OF ASHMUNELLA FROM THE DAVIS MOUNTAINS IN WEST TEXAS

By E.P. CHEATUM

Biology Department, Southern Methodist University, Dallas, Texas 75222

*Ashmunella mudgei*, new species. Figs. 1-4.

The glossy upper surface of this tannish-colored shell is slightly convex with the upper margin of the basal whorl carinated. The embryonic whorl is ornamented with fine delicate striae which on the protoconch are rather diffuse, then becoming regular with a beaded effect. Progressing from the embryonic whorl outward the striae become more conspicuous and the growth lines on the basal whorl are slightly coarser with a series of elevated ridges topped with white just back of the peristome. The lip is reflected outward and upward thus producing a wide, deep groove just back of the lip. The shell's umbilicus is contained slightly over 4 times in the shell diameter. The lower surface of the basal whorl is glossy with fine striae that extend from the carinated margin down into the umbilical region. Upon the parietal wall is an erect tooth slightly curved and shouldered at its proximal and distal ends, the proximal end continues as a distinct callus which is deflected toward the insertion of the outer lip. On the upper part of the parietal wall and slightly within the aperture is a rather short, shallow, straight dome-shaped tooth. Within the inner basal lip are two erect teeth pro-